AMENDMENTS TO THE CLAIMS

Please amend the claims of the present application as set forth below. In accordance with the PTO's revised amendment format, a detailed listing of all claims has been provided. This listing of claims will replace all prior versions and listings of claims in the application. Changes to the claims are shown by strikethrough (for deleted matter) and underlining (for added matter).

By way of overview, claims 1-12, 15, 17-36, and 38-49 are currently pending. The status of all of the claims is indicated below:

a) Claims 1-12, 15, 17-28, and 30-36 are original;

b) Claim 29 is currently amended;

c) Claims 13, 14, 16, and 37 are canceled without prejudice or disclaimer; and

d) Claims 38-49 are new.

Listing of Claims

1. (Original) A method for mapping between parts of an input document and associated parts of an output document, the input document pertaining to a first kind of document, and the output document pertaining to a second kind of document, comprising:

providing a translation file that converts documents of the first kind to documents of the second kind;

in a first phase, modifying the translation file to include mapping functionality that can provide information regarding relationships between parts of documents of the first kind and associated parts of documents of the second kind, the first phase producing a modified translation file;

in a second phase, using the modified translation file to convert the input document into the output document, including:

activating the mapping functionality; and

using the mapping functionality to provide references in the output document that associate parts of the output document with parts of the input document.

2. (Original) The method according to claim 1, where the first kind of document is a markup language document that uses tags pertaining to subject matter fields in the input document.

3. (Original) The method according to claim 2, wherein the first kind of document is expressed in the extensible markup language (XML).

4. (Original) The method according to claim 1, wherein the second kind of document is a markup language document that uses tags pertaining to visual features in the output document.

5. (Original) The method according to claim 4, wherein the second kind of document is expressed in hypertext markup language (HTML).

6. (Original) The method according to claim 1, wherein the output document comprises an electronic form having at least one data entry field therein, wherein the data

entry field is mapped to a corresponding part of the input document via at least one reference.

7. (Original) The method according to claim 6, further comprising:

receiving information input by a user into the data entry field; and

modifying the corresponding part of the input document pointed to by the at least one reference in response to the receiving.

8. (Original) The method according to claim 1, wherein the translation file is expressed in the extensible stylesheet language (XSL).

9. (Original) The method according to claim 8, wherein the modifying of the translation file includes adding extension functions to the translation file expressed in the extensible stylesheet language (XSL).

10. (Original) The method according to claim 9, wherein the activating of the mapping functionality includes calling the extension functions to return the references that associate parts of the output document with parts of the input document.

11. (Original) The method according to claim 1, wherein the modifying of the translation file in the first phase includes adding the mapping functionality at locations in the translation file that mark context changes in the output document.

12. (Original) The method according to claim 1, wherein the modifying of the translation file in the first phase includes adding the mapping functionality at locations in the translation file that mark data items contained in the input document that are to be bound to corresponding parts in the output document.

13. (Canceled).

14. (Canceled).

15. (Original) A method for generating mapping functionality that can map between parts of an input document and associated parts of an output document, the input document pertaining to a first kind of document, and the output document pertaining to a second kind of document, comprising:

providing a translation file that converts documents of the first kind to documents of the second kind; and

modifying the translation file to include mapping functionality that can provide information regarding relationships between parts of documents of the first kind and associated parts of documents of the second kind.

16. (Canceled).

17. (Original) An apparatus for mapping between parts of an input document and associated parts of an output document, the input document pertaining to a first kind of document, and the output document pertaining to a second kind of document, and further

wherein a translation file converts documents of the first kind to documents of the second kind, the apparatus comprising:

annotation logic configured to modify the translation file to include mapping functionality that can provide information regarding relationships between parts of documents of the first kind and associated parts of documents of the second kind, to thereby provide a modified translation file;

a storage for receiving the modified translation file;

runtime logic configured to convert the input document into the output document using the modified translation file in the storage, including:

activation logic configured to activate the mapping functionality; and

output logic configured to use the activated mapping functionality to provide references in the output document that associate parts of the output document with parts of the input document.

18. (Original) The apparatus according to claim 17, where the first kind of document is a markup language document that uses tags pertaining to subject matter fields in the input document.

19. (Original) The apparatus according to claim 18, wherein the first kind of document is expressed in the extensible markup language (XML).

20. (Original) The apparatus according to claim 17, wherein the second kind of document is a markup language document that uses tags pertaining to visual features in the output document.

21. (Original) The apparatus according to claim 20, wherein the second kind of document is expressed in hypertext markup language (HTML).

22. (Original) The apparatus according to claim 17, wherein the output document comprises an electronic form having at least one data entry field therein, wherein the data entry field is mapped to a corresponding part of the input document via at least one reference.

23. (Original) The apparatus according to claim 22, further comprising:

receiving logic configured to receive information input by a data into the user entry field; and

editing logic configured to modify the corresponding part of the input document pointed to by the at least one reference in response to the receiving.

24. (Original) The apparatus according to claim 17, wherein the translation file is expressed in the extensible stylesheet language (XSL).

25. (Original) The apparatus according to claim 24, wherein the annotation logic is configured to modify the translation file by adding extension functions to the translation file expressed in the extensible stylesheet language (XSL).

26. (Original) The apparatus according to claim 25, wherein the activation logic is configured to activate the mapping functionality by calling the extension functions to

return the references that associate parts of the output document with parts of the input document.

27. (Original) The apparatus according to claim 17, wherein the annotation logic is configured to modify the translation file in the first phase by adding the mapping functionality at locations in the translation file that mark context changes in the output document.

28. (Original) The apparatus according to claim 17, wherein the annotation logic is configured to modify the translation file in the first phase by adding the mapping functionality at locations in the translation file that mark data contained in the input document that are to be bound to corresponding parts in the output document.

29. (Currently amended) A computer readable medium having machine readable instructions for ~~implementing each of the logic recited in claim 17~~ mapping between parts of an input document and associated parts of an output document, the input document pertaining to a first kind of document, and the output document pertaining to a second kind of document, and further wherein a translation file converts documents of the first kind to documents of the second kind, the apparatus comprising:

annotation logic configured to modify the translation file to include mapping functionality that can provide information regarding relationships between parts of documents of the first kind and associated parts of documents of the second kind, to thereby provide a modified translation file;

a storage for receiving the modified translation file;

runtime logic configured to convert the input document into the output document using the modified translation file in the storage, including:

activation logic configured to activate the mapping functionality; and

output logic configured to use the activated mapping functionality to provide references in the output document that associate parts of the output document with parts of the input document.

30. (Original) An apparatus for providing mapping functionality that maps between parts of an input document and associated parts of an output document, the input document pertaining to a first kind of document, and the output document pertaining to a second kind of document, and further wherein a translation file converts documents of the first kind to documents of the second kind, the apparatus comprising:

annotation logic configured to modify the translation file to include mapping functionality that can provide information regarding relationships between parts of documents of the first kind and associated parts of documents of the second kind; and

a storage for receiving the modified translation file.

31. (Original) A computer readable medium having stored thereon an information structure, comprising:

a plurality of translation elements configured to convert a first kind of document into a second kind of document; and

a plurality of functions interspersed amongst the plurality of translation elements, the plurality functions configured to provide a respective plurality of references, wherein

the references provide pointers that link parts of the second kind of document with parts of the first kind of document.

32. (Original) The computer readable medium of claim 31, wherein a collection of the plurality of functions have respective positions amongst the plurality of translation elements so as to mark context changes in the second kind of document.

33. (Original) The computer readable medium of claim 31, wherein a collection of the plurality of functions have respective positions amongst the plurality of translation elements so as to mark data contained in the first kind of document that is to be bound with corresponding parts in the second kind of document.

34. (Original) A computer readable medium having stored thereon an information structure, comprising:

a plurality of translation elements configured to convert a first kind of document into a second kind of document; and

a plurality of references interspersed amongst the plurality of translation elements, wherein the plurality of references provide pointers that link respective parts of the second kind of document with parts of the first kind of document.

35. (Original) The computer readable medium of claim 34, wherein a collection of the plurality of references have respective positions amongst the plurality of translation elements so as to mark context changes in the second kind of document.

36. (Original) The computer readable medium of claim 34, wherein a collection of the plurality of references have respective positions amongst the plurality of translation elements so as to mark data contained in the first kind of document that is to be bound with corresponding parts in the second kind of document.

37. (Canceled).

38. (New) The method according to claim 1, wherein the translation file is expressed in an arbitrary format.

39. (New) The method according to claim 1, wherein the modifying is performed in a substantially automatic fashion.

40. (New) The method according to claim 15, wherein the translation file is expressed in an arbitrary format.

41. (New) The method according to claim 15, wherein the modifying is performed in a substantially automatic fashion.

42. (New) The apparatus according to claim 17, wherein the translation file is expressed in an arbitrary format.

43. (New) The apparatus according to claim 17, wherein the annotation logic is configured to modify the translation file in a substantially automatic fashion.

44. (New) The computer readable medium according to claim 29, wherein the translation file is expressed in an arbitrary format.

45. (New) The computer readable medium according to claim 29, wherein the annotation logic is configured to modify the translation file in a substantially automatic fashion.

46. (New) The apparatus according to claim 30, wherein the translation file is expressed in an arbitrary format.

47. (New) The apparatus according to claim 30, wherein the annotation logic is configured to modify the translation file in a substantially automatic fashion.

48. (New) The computer readable medium according to claim 31, wherein the translation elements are expressed in an arbitrary format.

49. (New) The computer readable medium according to claim 34, wherein the translation elements are expressed in an arbitrary format.